Remarks/Arguments:

By this Amendment, applicants have amended claims 4, 6, 7, and 13. Claims 4-7, 13, and 15-18 are pending.

Claim Rejections Under Section 112

Claims 4, 6, 7, 13 and 15-18 stand rejected under 35 U.S.C. § 112, first paragraph, for reasons set forth in numbered paragraph 5 of the Office Action. Specifically, the Examiner takes the position that the specification, while being enabling for using "opening extended in the vertical direction to avoid image blur", does not reasonably provide enablement for using "opening extended in the horizontal direction to obtain best mode of operation". By this Amendment, applicants have amended independent claims 4, 6, 7, and 13 to overcome the basis for this Section 112, first paragraph, rejection.

Referring to Figs. 16 and 17 of the subject application and as pointed out throughout the application, it is relevant that the slit be lengthened in a height or depth direction (i.e., a direction perpendicular to the line connecting with the viewer's eyes) without being widened in a width direction (i.e., the direction parallel to the line connecting with the viewer's eyes). While Fig. 16 and the subject application at page 43, lines 14-27, describe the two-dimensional situation where a slit can be extended in a vertical (height) or horizontal (width) direction, Fig. 17 shows, however, that it is acceptable in a three-dimensional situation for the light source to be aligned horizontally (in a depth direction) because when reflected off the hologram to the viewer, such a light source appears as a shortened vertical light source, which does not extend in the width direction. Applicants have therefore deleted the language objected to by the Examiner in independent claims 4, 6, 7, and 13. Instead, applicants have clarified applicants' claimed invention to indicate that the width direction is with respect to the viewer's eyes. By applicants amendment to these independent claims, the basis for the Section 112, first paragraph, rejection has been overcome.

It is applicants' contention that all pending claims are in full compliance with Section 112.

Claim Objections

Claims 4, 6, 7, 13, and 15-18 are objected to on informal grounds set forth in numbered paragraph 6 of the Office Action.

More specifically with respect to claim 4, the Examiner has stated that the phrase "an irradiation light incident on the second hologram dry plate with an incident optical path different from that of the object light" is unclear as to what this phrase has to do "with construction of the transmission hologram". Applicants respectfully submit that this phrase is not unclear. Applicants take this position with the recognition that part of the irradiation light is not related to the transmission hologram *per se,* but is related to the optical display apparatus as a whole. In particular, the portion of the claim in which the objected to phrase is found states "wherein the light having the information of the object is obtained by . . ." , which clearly indicates that this portion of the claim is directed to the structure of the apparatus as a whole. Applicants therefore submit that this phrase is not unclear and that there is no need to further amend this phrase in the context of applicants independent claims 4, 6, 7, and 13.

The Examiner also states that the phrase "the first hologram dry plate" as stated in claims 6, 7, and 13 "lacks proper antecedent basis from the earlier part of the claims". Applicants respectfully disagree. The use of the definite article "the" is only used beginning in the third full paragraph of each independent claim. But in the second full paragraph of each independent claim there is first stated "a first hologram dry plate". Thus, there is antecedent basis for this phrase.

The phrase "diffuses in only the width direction of the reflection type hologram" has also been objected to in claims 4, 6, 7, and 13. This phrase, however, has been deleted from all of these independent claims.

Applicants respectfully request that the objections to the claims set forth in numbered paragraph 6 of the Office Action be withdrawn.

Claim Rejections Under Section 103

Claims 4-7, 13, and 15-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kulick in view of Honigs. Applicants respectfully traverse this Section 103(a) rejection.

Applicants in the Amendment dated February 27, 2003, set forth with clarity their contention that the Kulick Patent and the Honigs Patent are not a proper combination because the Honigs Patent is not analogous art. Applicants request that the Examiner reconsider this position based on the remarks set forth in the earlier filed amendment and based on the following remarks.

The Manual of Patent Examining Procedure (MPEP) at Section 706.02(j) specifically sets forth the three criteria that must be met to establish a *prima facie* case of obviousness under Section 103. The first of these requirements is that "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings". It is also black letter law that the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". *In Re Fritch*, 23 USPQ 2d 1780, 1783, 1784 (Fed. Cir. 1992). The Office Action in not recognizing that the Honigs Patent is non-analogous art to the Kulick Patent (as well as applicants' claimed invention) is based on nothing more than hindsight reconstruction of applicants' claimed invention. Simply put, the Honigs Patent does not relate to the problem solved by applicants, and there is no motivation or suggestion in the Honigs Patent which would cause one skilled in the art to combine any teaching of a Honigs Patent with the Kulick Patent to achieve applicants' claimed invention.

Applicants categorically state that the Honigs Patent is absolutely not concerned with the problems solved by applicants. The problem solved by applicants relative to their claimed invention is to increase the visible zone of a hologram without significant chromatic aberration or blurring. This was unexpectedly solved by applicants by increasing the length of the opening of the slit without substantially increasing the width of the slit.

The Examiner in the Response to Arguments section of the Office Action takes the position that the Honigs Patent is concerned with illuminating a diffraction grating with light diffusing in a particular direction. Applicants respectfully dispute this interpretation of the Honigs Patent, but even if for the sake of arguendo it were true, there is still no recognition in the Honigs Patent of the problem recognized and solved by applicants' claimed invention.

The Examiner also goes on to state in the Response to Arguments, that "the fact the Honigs reference is applied to a spectrophotometer does not affect the teachings relied upon for generating a diffused illuminating light beam". Applicants respectfully submit that this position

ignores the very relevant fact that the Honigs Patent concerns spectrophotometrics which is non-holographic. One skilled in the art of holograms would not look for any teaching to solve the problem solved by applicants from a reference such as the Honigs Patent.

The Honigs Patent is significantly different in its teaching from that of the Kulick Patent (as well as applicants' claimed invention) for at least two reasons. The Honigs Patent is a spectrophotometric (non-holographic) diffraction grading, whereas the Kulick Patent uses a holographic diffraction grating. Also, the light in the Honigs Patent is evenly diffused off the quartz plate before entering the slit.

The use of slits in diffraction grading in general may be known. But the diffraction grating art is absolutely silent about applying a slit-shaped light source to a holographic diffraction grating. Until applicants claimed invention, light used for reconstructing hologram images had always been required to come from a point source rather than a slit source. Merely citing the use of a slit in a non-holographic reference such as the Honigs Patent provides no motivation at all to one skilled in the art to apply such slit in the holography art, to which applicants claimed invention relates.

Applicants respectfully submit that none of the references of record recognize the significance of the problem solved by applicants' claimed invention which is to increase the visible zone of a hologram without causing blur or chromatic aberration.

Based on the foregoing remarks, applicants respectfully submit that the combination of the Kulick Patent and the Honigs Patent is not a proper foundation for a Section 103 rejection, and respectfully requests that the Examiner withdraw such rejection to all pending claims.

Based on the foregoing remarks and amendments, applicants respectfully submit that claims 4-7, 13, and 15-18 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully submitted,

Daniel N. Calder

Daniel N. Calder (Reg. No. 27,424)
Attorney for Applicants

DNC/vj

Dated: September 5, 2003

☒ P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

☐ P.O. Box 1596
Wilmington, DE 19899
(302) 778-2600

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

September 5, 2003

Victoria Jones

VJ_I:\YAO\4302\AMEND02.DOC